

# **This is an official CDC HEALTH UPDATE**

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## **Updated Interim U.S. Case Definition for Severe Acute Respiratory Syndrome (SARS)**

The previous CDC SARS case definition (published April 30, 2003) has been updated as follows:

- Epidemiologic criteria for travel exposure have been updated to specify dates of illness onset for each area
- Interim criteria for exclusion of previously reported cases have been added

### **Clinical Criteria**

- Asymptomatic or mild respiratory illness
- Moderate respiratory illness
  - Temperature of  $>100.4^{\circ}\text{F}$  ( $>38^{\circ}\text{C}$ )\*, and
  - One or more clinical findings of respiratory illness (e.g., cough, shortness of breath, difficulty breathing, or hypoxia).
- Severe respiratory illness
  - Temperature of  $>100.4^{\circ}\text{F}$  ( $>38^{\circ}\text{C}$ )\*, and
  - One or more clinical findings of respiratory illness (e.g., cough, shortness of breath, difficulty breathing, or hypoxia), and
    - radiographic evidence of pneumonia, or
    - respiratory distress syndrome, or
    - autopsy findings consistent with pneumonia or respiratory distress syndrome without an identifiable cause.

### **Epidemiologic Criteria**

- Travel (including transit in an airport) within 10 days of onset of symptoms to an area with current or previously documented or suspected community transmission of SARS (see Table), or
- Close contact§ within 10 days of onset of symptoms with a person known or suspected to have SARS

**Travel criteria for suspect or probable U.S. cases of SARS**

Area	First date of illness onset for inclusion as reported case	Last date of illness onset for inclusion as reported case
China (mainland)	November 1, 2002	Ongoing
Hong Kong	February 1, 2003	Ongoing
Hanoi, Vietnam	February 1, 2003	May 25, 2003
Singapore	February 1, 2003	Ongoing
Toronto, Canada	April 23, 2003	May 30, 2003
Taiwan	May 1, 2003	Ongoing

#### Laboratory Criteria

- Confirmed

—Detection of antibody to SARS-CoV in specimens obtained during acute illness or >21 days after illness onset, or

—Detection of SARS-CoV RNA by RT-PCR confirmed by a second PCR assay, by using a second aliquot of the specimen and a different set of PCR primers, or

—Isolation of SARS-CoV.

- Negative

—Absence of antibody to SARS-CoV in convalescent serum obtained >21 days after symptom onset.

- Undetermined

—Laboratory testing either not performed or incomplete.

#### Case Classification\*\*

- Probable case: meets the clinical criteria for severe respiratory illness of unknown etiology and epidemiologic criteria for exposure; laboratory criteria confirmed, negative, or undetermined.

- Suspect case: meets the clinical criteria for moderate respiratory illness of unknown etiology, and epidemiologic criteria for exposure; laboratory criteria confirmed, negative, or undetermined.

#### Exclusion Criteria

A case may be excluded as a suspect or probable SARS case if:

- An alternative diagnosis can fully explain the illness\*\*\*

- The case was reported on the basis of contact with an index case that was subsequently excluded as a case of SARS (e.g., another etiology fully explains the illness) provided other possible epidemiologic exposure criteria are not present

\* A measured documented temperature of  $>100.4^{\circ}\text{F}$  ( $>38^{\circ}\text{C}$ ) is preferred. However, clinical judgment should be used when evaluating patients for whom a measured temperature of  $>100.4^{\circ}\text{F}$  ( $>38^{\circ}\text{C}$ ) has not been documented. Factors that might be considered include patient self-report of fever, use of antipyretics, presence of immunocompromising conditions or therapies, lack of access to health care, or inability to obtain a measured temperature. Reporting authorities should consider these factors when classifying patients who do not strictly meet the clinical criteria for this case definition.

§ Close contact is defined as having cared for or lived with a person known to have SARS or having a high likelihood of direct contact with respiratory secretions and/or body fluids of a patient known to have SARS. Examples of close contact include kissing or embracing, sharing eating or drinking utensils, close conversation ( $<3$  feet), physical examination, and any other direct physical contact between persons. Close contact does not include activities such as walking by a person or sitting across a waiting room or office for a brief period of time.

‡ The WHO has specified that the surveillance period for China should begin on November 1; the first recognized cases in Hong Kong, Singapore and Hanoi (Vietnam) had onset in February 2003. The dates for Toronto and Taiwan are linked to CDC's issuance of travel recommendations.

† The last date for illness onset is 10 days (i.e., one incubation period) after removal of a CDC travel alert. The case patient's travel should have occurred on or before the last date the travel alert was in place.

Assays for the laboratory diagnosis of SARS-CoV infection include enzyme-linked immunosorbent assay, indirect fluorescent-antibody assay, and reverse transcription polymerase chain reaction (RT-PCR) assays of appropriately collected clinical specimens (Source: CDC. Guidelines for collection of specimens from potential cases of SARS. Available at [http://www.cdc.gov/ncidod/sars/specimen\\_collection\\_sars2.htm](http://www.cdc.gov/ncidod/sars/specimen_collection_sars2.htm)). Absence of SARS-CoV antibody from serum obtained  $\leq 21$  days after illness onset, a negative PCR test, or a negative viral culture does not exclude coronavirus infection and is not considered a definitive laboratory result. In these instances, a convalescent serum specimen obtained  $>21$  days after illness is needed to determine infection with SARS-CoV. All SARS diagnostic assays are under evaluation.

\*\* Asymptomatic SARS-CoV infection or clinical manifestations other than respiratory illness might be identified as more is learned about SARS-CoV infection.

\*\*\* Factors that may be considered in assigning alternate diagnoses include the strength of the epidemiologic exposure criteria for SARS, the specificity of the diagnostic test, and the compatibility of the clinical presentation and course of illness for the alternative diagnosis.

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